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ABSTRACT

Over 240 secondary school principals, guidance counselors, and teachers were interviewed to determine the relative degree of emphasis that should be placed on various topical areas in evaluation during the preservice training of teachers. The specific topical areas included writing behavioral objectives, developing objective tests, developing essay tests, conducting an item analysis, developing checklists and rating scales, using descriptive statistics, interpreting basic statistical terms, estimating the reliability and validity of their own tests, identifying pupil learning problems, evaluating pupil personal-social adjustment in the classroom, grading, communicating with parents, and selecting, administering, scoring, and interpreting standardized achievement tests. The results of the survey indicated that all of these topical areas should be included in preservice teacher training, with particular emphasis on constructing objective tests, identifying pupil learning problems, evaluating pupil personal-social adjustment, grading, and communicating with parents. (BW)

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# PERCEPTIONS OF SECONDARY SCHOOL PROFESSIONAL PERSONNEL IN RELATION TO TEACHER TRAINING IN PUPIL EVALUATION PROCEDURES

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The training of prospective teachers for work in the secondary school may be found to pose a problem both for the college professor of education who is attempting to provide a functional foundation for the future secondary school teacher and for the college student aspiring to serve in this future teaching position if the college preparation of the student diverges greatly from those teaching competencies required in the situations occurring in the real teaching world of the secondary school. The area of testing, measurement, and evaluation is one in which the preservice training of the teacher should correspond closely with the realities of the teaching conditions in the secondary school. Based upon a personal educational philosophy of pragmatism, the author conducted an interview survey of professional secondary school personnel consisting of secondary school principals, guidance counselors, and teachers: the purpose of the survey was to determine the relative degree of emphasis that should be placed during the preservice training of teachers upon various topical areas in the field of evaluation as these emphases are perceived by inservice professional persons in the secondary schools.

During a period of ten weeks, the author visited 130 randomly-selected secondary schools located along the eastern border of Ohio, the northwestern border of New York, and the north-central and western areas of Pennsylvania.

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The sample of schools visited was composed of 98 senior and junior-senior high schools, 20 junior high schools, 10 middle schools, and two vocational-technical schools. Within these schools, 244 school personnel consisting of 83 school principals, 76 guidance counselors, and 85 teachers were interviewed. The interviews were conducted through the use of a combination of a structured interview instrument and a more flexible unstructured interview procedure. The structured instrument included as a summarization of the major content areas of the author's present college course in evaluative techniques in the secondary school the following items for consideration by the 244 respondents in the sample:

ITEM 1. Should beginning teachers be able to identify, state, and write behavioral objectives in relation to the planning and construction of teacher-made classroom tests?

ITEM 2. In relation to teacher-made objective tests, how important is it to train beginning teachers to plan the tests, construct good test items, and administer the objective test?

ITEM 3. Should beginning teachers be able to construct good essay tests and score essay tests effectively?

ITEM 4. Should beginning teachers be able to conduct an item analysis of objective tests and maintain a file of good objective test items?

ITEM 5. Should beginning teachers be able to construct and use check lists and rating scales to evaluate the performances and the products of pupils?

ITEM 6. Should beginning teachers be able to use descriptive statistics and to interpret basic statistical terms in relation to tests?

ITEM 7. Should beginning teachers be able to estimate the reliability and the validity of their own teacher-made tests?

ITEM 8. Should beginning teachers be able to identify pupil learning problems in relation to reading, spelling, and arithmetic, subsequently taking steps to apply remedial help in the classroom?

ITEM 9. Should beginning teachers receive training in evaluating pupil personal-social adjustment in the classroom, particularly as this adjustment pertains to classroom discipline?

ITEM 10. Should beginning teachers be able to perform effectively those tasks related to grading?

ITEM 11. Should beginning teachers be trained in communicating with parents?

ITEM 12. In relation to standardized subject-matter achievement tests, should beginning teachers be able to select, administer, score, and interpret such tests?

The interview responses to these items were classified as "YES", "UNDECIDED", or "NO"; in the case of item 2, the responses were classified as "ESSENTIAL", "HELPFUL", or "USELESS". During each interview, the respondents were encouraged to elaborate upon their responses: commonly-recurring responses having a minimum arbitrarily-selected recurrence rate of 20.00% were summarized in terms of the per cent of the sample voluntarily presenting these common perceptions during the interviews. Audiotape recordings of randomly-selected interviews were made for future analysis as well as for playback to the preservice college students in the evaluative techniques course. Additional information obtained from each respondent during the interviews consisted of responses to these questions:

1. What other ideas or topics about testing and evaluation do you feel should be emphasized to the preservice college student?
2. What subjects have you taught or are you now teaching?
3. What grade levels have you taught or are you now teaching?
4. What types of classroom tests or evaluation instruments have you used or are you now using?
5. How many years of experience in education have you had?

The mean time required for each interview was approximately 24 minutes.

In addition to the direct interviews, observations of various unobtrusive measures were made: these observations consisted of (1) analyses of 123 teacher-made classroom tests offered by various teachers in the sample, (2) analyses of guidance materials, e.g., permanent record cards, cumulative record folders, curriculum guides, counselor forms, offered by guidance counselors in 41 different school districts, (3) review of standardized tests used by individual teachers and by the school systems, and (4) observations of personal-social interactions of pupils, teachers, and administrators within the schools visited.

The frequency of occurrence of a "YES" response ( or an "ESSENTIAL" response in the case of Item 2) for all subjects of the sample is shown in the following table:

FREQUENCY OF "YES" RESPONSES TO EACH ITEM

| ITEM | Principals | Guidance Counselors | Teachers |
|---|---|---|---|
| 1 | 56 | 48 | 49 |
| 2 | 77 | 76 | 65 |
| 3 | 73 | 15 | 57 |
| 4 | 83 | 54 | 43 |
| 5 | 61 | 46 | 52 |
| 6 | 31 | 18 | 17 |
| 7 | 42 | 30 | 49 |
| 8 | 69 | 53 | 74 |
| 9 | 83 | 51 | 85 |
| 10 | 71 | 39 | 71 |
| 11 | 66 | 76 | 73 |
| 12 | 43 | 47 | 36 |

Kruskal-Wallis H = 3.02 (Not significant, $p < 0.05$)

A Kruskal-Wallis H test was conducted with these data to determine whether the group of principals, guidance counselors, and teachers were drawn from the same population. The null hypothesis of no significant

difference among these groups was retained ($H = 3.82$, $p < 0.05$), revealing that the entire sample of 244 secondary school personnel represents accurately the larger population.

The responses of each person interviewed were classified by (1) professional responsibility, (2) major area of teaching, (3) grade levels usually taught, and (4) years of experience in education. For each of these categories in each of the twelve interview items, these statistics were computed: (1) the value of chi-square, determining the significance of the deviation of the observed frequencies from a chance deviation, (2) the per cents of "YES" or "ESSENTIAL" responses, (3) the confidence intervals at the 5% level of confidence for each of these per cents, and (4) the per cent of occurrence of statements of related perceptions offered voluntarily by an arbitrarily-defined minimum of 20.00% of the respondents interviewed. These data are summarized for each interview item as follows:

ITEM 1

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p= 0.05) |
|---|---|---|---|---|---|
| Principals | 56 | 21 | 6 | 67.47% | 57.39% to 77.55% |
| Guidance Counselors | 48 | 22 | 6 | 63.16% | 52.31% to 74.01% |
| Teachers | 49 | 29 | 7 | 57.65% | 47.14% to 68.15% |

$\chi^2$ = 1.824 (Not significant, p = 0.05)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 53 | 23 | 4 | 66.25% | 55.89% to 76.61% |
| Science/Mathematics | 37 | 15 | 8 | 61.67% | 49.37% to 73.97% |
| English/Foreign Languages | 33 | 21 | 0 | 61.11% | 48.11% to 74.11% |
| Other | 30 | 13 | 7 | 60.00% | 46.42% to 73.58% |

$\chi^2$ = 12.357 (Significant, $p < 0.02$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 46 | 13 | 6 | 70.77% | 59.71% to 81.83% |
| Grades 10 - 12 | 107 | 59 | 13 | 59.78% | 52.60% to 66.96% |

$\chi^2$ = 3.871 (Not significant, p = 0.05)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 2 | 8 | 0 | 20.00% | 0.00% to 44.79% |
| 4 - 10 years | 28 | 17 | 5 | 56.00% | 42.24% to 69.76% |
| 11 + years | 123 | 47 | 14 | 66.85% | 60.05% to 73.65% |

$\chi^2$ = 14.843 (Significant ($p < 0.01$)

ITEM 1 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

In view of the present state requirements, it is essential that teachers be able to write behavioral objectives. (56.97%)

Behavioral objectives should be written in terms of the needs of the students. (36.88%)

Practical training is essential to enable teachers to state behavioral objectives. (61.88%)

Teachers should be trained to write behavioral objectives for their tests. (58.20%)

ANALYSIS AND IMPLICATIONS FOR ITEM 1

A majority of personnel in all areas appear to favor the use of behavioral objectives with the exception of those persons with a small number of years of teaching experience. Teachers in the lower grades appear to favor the use of these objectives more strongly than do those in the senior high school. There is a high probability that the use of behavioral objectives will be advantageous to the beginning teacher: the identification and the writing of behavioral objectives should be stressed in the undergraduate course in evaluative techniques in the secondary school.

ITEM 2

| Professional Responsibility | ESSENTIAL | HELPFUL | USELESS | PER CENT "ESSENTIAL" | CONFIDENCE INTERVAL FOR "ESSENTIAL" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 77 | 0 | 6 | 92.77% | 87.20% to 98.34% |
| Guidance Counselors | 76 | 0 | 0 | 100.00% | 100.00% |
| Teachers | 65 | 15 | 5 | 76.47% | 67.45% to 85.49% |

$\chi^2 = 35.898$ (Significant, $p < 0.001$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 69 | 6 | 5 | 86.25% | 85.44% to 87.06% |
| Science/Mathematics | 60 | 0 | 0 | 100.00% | 100.00% |
| English/Foreign Languages | 42 | 6 | 6 | 77.78% | 66.69% to 88.87% |
| Other | 47 | 3 | 0 | 94.00% | 87.42% to 100.00% |

$\chi^2 = 18.598$ (Significant, $p < 0.01$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 65 | 0 | 0 | 100.00% | 100.00% |
| Grades 10 - 12 | 153 | 15 | 11 | 85.47% | 80.31% to 90.63% |

$\chi^2 = 10.576$ (Significant, $p < 0.01$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 5 | 5 | 0 | 50.00% | 19.01% to 80.99% |
| 4 - 10 years | 44 | 6 | 0 | 88.00% | 78.99% to 97.01% |
| 11 + years | 169 | 4 | 11 | 91.85% | 87.90% to 95.80% |

$\chi^2 = 44.561$ (Significant, $p < 0.001$)

ITEM 2 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

The details of correct test and test item construction should be emphasized to preservice teachers. (76.23%)

Teacher-made tests are often made very poorly. (66.80%)

Teachers should be trained to place increased emphasis upon objective test items requiring higher levels of thinking. (54.10%)

Teachers should be taught to evaluate the reading levels of the tests that they use. (34.84%)

The practical applications of test construction, administration, and scoring should be stressed for beginning teachers. (88.52%)

Inservice teachers do need much training in the area of test construction. (46.72%)

ANALYSIS AND IMPLICATIONS FOR ITEM 2

Persons in all areas of responsibility, in all teaching areas, at all grade levels, and with all ranges of years of experience believe that this is an essential area of training for beginning teachers: the least need is felt by those persons with only a few years of experience. Administrators and guidance counselors seem to feel that this area is more essential than do teachers and the upper-grade persons place slightly less emphasis upon this training than do the lower-grade persons. However, noting the lower limits of the confidence intervals, it is evident that this area should receive maximum emphasis during the course in evaluative techniques. The chi-square values provide strong evidence that these findings are truly representative of secondary school personnel throughout Ohio, New York, and Pennsylvania.

ITEM 3

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 73 | 0 | 10 | 87.95% | 80.95% to 94.95% |
| Guidance Counselors | 15 | 46 | 15 | 19.74% | 10.79% to 28.69% |
| Teachers | 57 | 19 | 9 | 67.06% | 57.07% to 77.05% |

$\chi^2 = 89.849$ (Significant, $p < 0.001$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 64 | 16 | 0 | 80.00% | 71.23% to 88.76% |
| Science/Mathematics | 25 | 12 | 23 | 41.67% | 29.20% to 54.14% |
| English/Foreign Languages | 32 | 16 | 6 | 59.26% | 46.15% to 72.36% |
| Other | 24 | 21 | 5 | 48.00% | 34.15% to 61.8[illegible] |

$\chi^2 = 54.555$ (Significant, $p < 0.001$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 32 | 31 | 2 | 49.23% | 37.08% to 61.38% |
| Grades 10 - 12 | 113 | 34 | 32 | 63.13% | 56.06% to 70.20% |

$\chi^2 = 23.781$ (Significant, $p < 0.001$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 9 | 1 | 0 | 90.00% | 71.41% to 100.00% |
| 4 - 10 years | 16 | 27 | 7 | 32.00% | 19.07% to 44.93% |
| 11 + years | 120 | 37 | 27 | 65.22% | 58.34% to 72.10% |

$\chi^2 = 28.438$ (Significant, $p < 0.001$)

ITEM 3 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

Teachers often hesitate to administer essay tests because of the time required for scoring these tests. (86.08%)

Teachers should be taught to use more essay tests in those subjects to which essay tests are best suited. (76.23%)

Teachers need training in increasing the objectivity of scoring essay tests. (63.93%)

ANALYSIS AND IMPLICATIONS FOR ITEM 3

The high degree of significance in all areas indicates that these data are highly representative in all categories. Essay tests are favored in those subject areas in which their use seems to be most adaptable. Persons with only a few years of teaching experience appear to be most eager to use essay tests while persons with experience as guidance counselors tend to see the smallest need for the training of teachers in the use of essay tests. The major disadvantage to the use of essay tests appears to be the teacher time needed to score such tests as well as the subjectivity in the scoring. The per cents indicate that a definite emphasis should be placed upon the construction and scoring of essay tests in teacher training.

ITEM 4

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 83 | 0 | 0 | 100.00% | 100.00% |
| Guidance Counselors | 54 | 17 | 5 | 71.05% | 60.85% to 81.25% |
| Teachers | 43 | 36 | 6 | 50.59% | 39.96% to 61.22% |

$\chi^2 = 54.404$ (Significant, $p < 0.001$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 63 | 17 | 0 | 78.75% | 69.78% to 87.71% |
| Science/Mathematics | 46 | 8 | 6 | 76.67% | 65.97% to 87.37% |
| English/Foreign Languages | 26 | 28 | 0 | 48.15% | 34.82% to 61.48% |
| Other | 45 | 0 | 5 | 90.00% | 81.68% to 98.32% |

$\chi^2 = 55.744$ (Significant, $p < 0.001$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 41 | 18 | 6 | 63.08% | 51.35% to 74.81% |
| Grades 10 - 12 | 139 | 35 | 5 | 77.65% | 71.55% to 83.75% |

$\chi^2 = 7.211$ (Significant, $p < 0.05$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 0 | 5 | 5 | 0.00% | 0.00% |
| 4 - 10 years | 35 | 9 | 6 | 70.00% | 63.52% to 76.48% |
| 11 + years | 145 | 39 | 0 | 78.80% | 75.79% to 81.81% |

$\chi^2 = 72.700$ (Significant, $p < 0.001$)

ITEM 4 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N - 244) stating these perceptions.)

Completing an item analysis and maintaining a file of good objective test items are excellent procedures if adequate time is available to the teacher. (83.61%)

Procedures for test item analysis are derived from experience: very little training is necessary for this. (29.92%)

Item analysis procedures are useful if these procedures are simple and easy to apply. (76.64%)

Teachers should be trained and encouraged to maintain a file of useful test items. (78.28%)

ANALYSIS AND IMPLICATIONS FOR ITEM 4

Training in conducting an item analysis and maintaining a file of good objective test items is highly desirable: only those personnel with a few years of experience disagree with this concept. Teachers appear to feel less strongly a need for training in this area than do administrators and guidance personnel: the desirability of this training increases as the number of years of experience increases. The major limiting factor in conducting item analyses and building item files appears to be a lack of time on the part of the teacher. These findings represent the feelings of the entire population very well: all areas related to item analyses and the formation of test item banks should be emphasized in the course in evaluative techniques.

ITEM 5

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 61 | 17 | 5 | 73.49% | 63.99% to 82.98% |
| Guidance Counselors | 46 | 25 | 5 | 60.53% | 49.54% to 71.52% |
| Teachers | 52 | 24 | 9 | 61.18% | 50.82% to 71.54% |

$\chi^2 = 4.995$ (Not significant, p = 0.05)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 59 | 16 | 5 | 73.75% | 64.11% to 83.39% |
| Science/Mathematics | 30 | 20 | 10 | 50.00% | 37.35% to 62.65% |
| English/Foreign Languages | 48 | 6 | 0 | 88.89% | 80.51% to 97.27% |
| Other | 22 | 24 | 4 | 44.00% | 30.24% to 57.76% |

$\chi^2 = 37.195$ (Significant, $p < 0.001$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 29 | 28 | 8 | 44.62% | 32.54% to 56.70% |
| Grades 10 - 12 | 130 | 38 | 11 | 72.62% | 66.09% to 79.15% |

$\chi^2 = 16.491$ (Significant, $p < 0.001$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 7 | 3 | 0 | 70.00% | 41.60% to 98.40% |
| 4 - 10 years | 21 | 20 | 9 | 42.00% | 28.32% to 55.68% |
| 11 + years | 131 | 43 | 10 | 71.20% | 64.66% to 77.74% |

$\chi^2 = 18.040$ (Significant, $p < 0.01$)

ITEM 5 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

Check lists and rating scales are very useful for teachers in increasing their objectivity of pupil evaluation. (65.98%)

Check lists and rating scales should be used as pretests in evaluating the performances of students. (39.34%)

Teacher education should provide training in the actual construction of check lists and rating scales. (38.85%)

ANALYSIS AND IMPLICATIONS FOR ITEM 5

Training in the construction and the use of check lists and rating scales is felt to be of much importance by persons in the areas of social studies and English/foreign language teaching while persons working in the higher grades attach more importance to these than do persons in the lower grades. While the percentages appear to indicate that a majority of persons in all areas of professional responsibility favor the training in this area, the lack of significance for these data indicates that the opinions of this sample may not be highly generalizable to the entire population. However, an overall view of the data suggests that definite training should be provided in the area of evaluating pupil performances and products.

ITEM 6

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 31 | 29 | 23 | 37.35% | 26.94% to 47.76% |
| Guidance Counselors | 18 | 29 | 29 | 23.68% | 14.12% to 33.24% |
| Teachers | 17 | 36 | 32 | 20.00% | 11.50% to 28.50% |

$\chi^2 = 7.391$ (Not significant, $p = 0.05$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 19 | 38 | 23 | 23.75% | 14.42% to 33.08% |
| Science/Mathematics | 11 | 32 | 17 | 18.33% | 8.54% to 28.12% |
| English/Foreign Languages | 20 | 11 | 23 | 37.04% | 24.16% to 49.92% |
| Other | 16 | 13 | 21 | 32.00% | 19.07% to 44.93% |

$\chi^2 = 19.473$ (Significant, $p < 0.01$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 15 | 31 | 19 | 23.08% | 12.84% to 33.32% |
| Grades 10 - 12 | 51 | 63 | 65 | 28.49% | 21.88% to 35.10% |

$\chi^2 = 3.146$ (Not significant, $p = 0.05$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 0 | 0 | 10 | 0.00% | 0.00% |
| 4 - 10 years | 19 | 16 | 15 | 38.00% | 24.54% to 51.45% |
| 11 + years | 47 | 78 | 59 | 25.54% | 19.24% to 31.84% |

$\chi^2 = 23.283$ (Significant, $p < 0.001$)

ITEM 6 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

School administrators do need a thorough understanding of statistics. (31.97%)

Teachers do need a general overview of descriptive statistics with the definitions of important terms. (29.10%)

Teachers have very little time or training to apply statistics in their daily work. (82.79%)

Teachers should be able to apply practical classroom statistical procedures. (33.20%)

Teachers do have a need to interpret scores recorded in the cumulative record folders or permanent record cards of pupils. (29.51%)

Teachers should use guidance counselors as resource persons for the use and the interpretation of statistics. (42.62%)

Teachers should be able to apply practical statistics to increase the objectivity of their grading procedures. (38.93%)

ANALYSIS AND IMPLICATIONS FOR ITEM 6

A pervasive trend existing throughout all categories indicates that the training of beginning teachers in basic descriptive statistics is of minor importance. It is generally felt that teachers have little need for the use of statistics because of the time required for this use as well as the generally weak understanding of teachers in the area of statistics. Although the findings existing in the areas of professional responsibility and grade level taught are insignificant from those expected by chance responses, the low percentages do suggest that this area of training is considered to be of less than moderate importance for practical work by the classroom teacher. The course in evaluative techniques may well include a general overview of basic descriptive statistics with realistic classroom applications.

ITEM 7

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 42 | 41 | 0 | 50.60% | 39.84% to 61.36% |
| Guidance Counselors | 30 | 46 | 0 | 39.47% | 28.48% to 50.46% |
| Teachers | 47 | 19 | 19 | 55.29% | 44.72% to 65.86% |
| | | $\chi^2 = 52.161$ (Significant, $p < 0.001$) | | | |
| **Teaching Area** | | | | | |
| Social Studies | 31 | 36 | 13 | 38.75% | 28.07% to 49.42% |
| Science/Mathematics | 32 | 28 | 0 | 53.33% | 40.71% to 65.95% |
| English/Foreign Languages | 12 | 36 | 6 | 22.22% | 11.13% to 33.31% |
| Other | 44 | 6 | 0 | 88.00% | 78.99% to 97.01% |
| | | $\chi^2 = 60.459$ (Significant, $p < 0.001$) | | | |
| **Grade Level Taught** | | | | | |
| Grades 7 - 9 | 22 | 43 | 0 | 33.85% | 22.35% to 45.35% |
| Grades 10 - 12 | 97 | 63 | 19 | 54.19% | 46.89% to 61.49% |
| | | $\chi^2 = 21.459$ (Significant, $p < 0.001$) | | | |
| **Years Experience** | | | | | |
| 0 - 3 years | 0 | 4 | 6 | 0.00% | 0.00% |
| 4 - 10 years | 31 | 19 | 0 | 62.00% | 48.54% to 75.45% |
| 11 + years | 88 | 83 | 13 | 47.83% | 40.61% to 55.05% |
| | | $\chi^2 = 46.144$ (Significant, $p < 0.001$) | | | |

ITEM 7 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

Teachers should understand the meanings of the terms "reliability" and "validity". (57.79%

Statistical procedures used to estimate classroom test reliability are of limited practical use for teachers. (44.67%)

Teachers must stress the validity of their own tests. (62.70%)

ANALYSIS AND IMPLICATIONS FOR ITEM 7

It is felt generally that the determination of the reliability and the validity of their own classroom tests by teachers is of moderate or slightly less than moderate importance. Experienced personnel feel much more strongly than do inexperienced personnel that this item is useful for beginning teachers while persons in the "other" category of teaching areas believe strongly that this is a very important area. Because of the significance of the findings indicated in all categories, the area of the reliability and the validity of teacher-made classroom tests should be emphasized at least to a moderate degree in the course in evaluative techniques.

ITEM 8

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 69 | 14 | 0 | 83.13% | 75.07% to 91.19% |
| Guidance Counselors | 53 | 15 | 8 | 69.74% | 59.41% to 80.07% |
| Teachers | 74 | 6 | 5 | 87.06% | 79.92% to 94.20% |

$\chi^2 = 14.996$ (Significant, $p < 0.01$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 67 | 13 | 0 | 83.75% | 75.66% to 91.83% |
| Science/Mathematics | 60 | 0 | 0 | 100.00% | 100.00% |
| English/Foreign Languages | 35 | 14 | 5 | 64.81% | 52.07% to 77.55% |
| Other | 34 | 8 | 8 | 68.00% | 55.07% to 80.93% |

$\chi^2 = 39.280$ (Significant, $p < 0.001$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 46 | 10 | 9 | 70.77% | 59.71% to 81.83% |
| Grades 10 - 12 | 150 | 25 | 4 | 83.80% | 78.40% to 89.20% |

$\chi^2 = 13.162$ (Significant, $p < 0.01$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 10 | 0 | 0 | 100.00% | 100.00% |
| 4 - 10 years | 41 | 2 | 7 | 82.00% | 71.35% to 92.65% |
| 11 + years | 145 | 33 | 6 | 78.80% | 72.89% to 84.71% |

$\chi^2 = 16.452$ (Significant, $p < 0.01$)

ITEM 8 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

Teachers should use competency-based testing to identify pupil learning problems. (41.80%)

The teacher identification of pupil learning problems is extremely important. (75.00%)

Practical procedures for diagnosing and helping to correct pupil learning problems of very helpful to the teacher. (57.79%)

After the identification of learning problems, teachers should make referrals to the proper learning specialists. (63.11%)

Field experience of preservice students is essential for working with pupil learning problems. (47.95%)

Teachers should be able to use the instruments for diagnosing pupil learning problems. (33.61%)

The diagnosis and remediation of pupil learning problems is essential because of the present emphasis upon accountability. (68.85%)

Teachers should be trained to emphasize individual diagnosis and remediation of pupil learning problems. (65.98%)

Teachers should be given help in developing a personal concern for their pupils. (77.05%)

Field experiences for preservice teachers should occur as soon as possible in their college training. (46.72%)

Teachers must be trained to avoid bias when using and interpreting student records. (36.48%)

ANALYSIS AND IMPLICATIONS FOR ITEM 8

The high degrees of significance and the high percentages of "yes" responses indicate that this area should receive maximum emphasis in the preservice training of teachers. Beginning teachers in the upper grade levels appear especially to feel a strong need for such training. All areas of diagnosis and remediation of pupil learning problems should be stressed in the course in evaluative techniques.

ITEM 9

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 83 | 0 | 0 | 100.00% | 100.00% |
| Guidance Counselors | 51 | 25 | 0 | 67.11% | 56.55% to 77.67% |
| Teachers | 85 | 0 | 0 | 100.00% | 100.00% |

$\chi^2 = 61.538$ (Significant, $p < 0.001$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 70 | 10 | 0 | 87.50% | 80.25% to 94.75% |
| Science/Mathematics | 57 | 3 | 0 | 95.00% | 89.48% to 100.00% |
| English/Foreign Languages | 44 | 10 | 0 | 81.48% | 71.12% to 91.84% |
| Other | 48 | 2 | 0 | 96.00% | 90.57% to 100.00% |

$\chi^2 = 8.381$ (Not significant, p = 0.05)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 56 | 9 | 0 | 86.15% | 77.75% to 94.55% |
| Grades 10 - 12 | 163 | 16 | 0 | 91.06% | 86.88% to 95.24% |

$\chi^2 = 1.249$ (Not significant, p = 0.05)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 10 | 0 | 0 | 100.00% | 100.00% |
| 4 - 10 years | 49 | 1 | 0 | 98.00% | 94.12% to 100.00% |
| 11 + years | 160 | 24 | 0 | 86.96% | 82.09% to 91.82% |

$\chi^2 = 6.397$ (Not significant, p = 0.05)

ITEM 9 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

Procedures for evaluating classroom discipline problems should receive maximum emphasis. (91.80%)

An increased amount of on-the-job training in classroom discipline procedures is needed by teachers. (53.69%)

Classroom behavior problems have changed radically during the past ten years. (41.80%)

Classroom discipline is the major problem of beginning teachers. (92.62%)

Teachers should be trained to handle most of their own classroom behavior problems. (30.74%)

Field experiences of preservice students should stress the interpersonal relationships of all school personnel. (78.69%)

Inservice professional school personnel should be brought into the college classroom to discuss practical problems of personal-social adjustment. (50.82%)

Preservice teachers should be counseled and evaluated to determine whether they should enter teaching. (43.85%)

Students working in a field experience should be evaluated and counseled carefully in relation to their own personal-social relationships. (51.23%)

The legal aspects of the teacher's classroom work should be emphasized to beginning teachers. (28.69%)

Teachers must be taught that the evaluation of problems in personal-social relationships are different in urban schools from those in rural schools. (25.82%)

ANALYSIS AND IMPLICATIONS FOR ITEM 9

Although the frequencies of responses in three of the four categories are not significant, the consistently high percentages of "yes" responses in each category suggests that this is an area of tremendous importance for the training of teachers. All areas of personal-social adjustment of both professional persons and school students should receive a very high degree of emphasis in evaluative techniques: the high degree of agreement among the responses to this item and to item 8 is notable.

ITEM 10

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 71 | 12 | 0 | 85.54% | 77.97% to 93.11% |
| Guidance Counselors | 39 | 37 | 0 | 51.31% | 40.07% to 62.55% |
| Teachers | 71 | 14 | 0 | 83.53% | 75.64% to 91.42% |

$\chi^2 = 30.229$ (Significant, $p < 0.001$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 65 | 15 | 0 | 81.25% | 72.70% to 89.80% |
| Science/Mathematics | 51 | 9 | 0 | 85.00% | 75.96% to 94.04% |
| English/Foreign Languages | 48 | 6 | 0 | 88.89% | 80.51% to 97.27% |
| Other | 17 | 33 | 0 | 34.00% | 20.87% to 47.13% |

$\chi^2 = 53.997$ (Significant, $p < 0.001$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 25 | 40 | 0 | 38.46% | 26.63% to 50.29% |
| Grades 10 - 12 | 156 | 23 | 0 | 87.15% | 82.25% to 92.05% |

$\chi^2 = 59.039$ (Significant, $p < 0.001$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 5 | 5 | 0 | 50.00% | 19.01% to 80.99% |
| 4 - 10 years | 23 | 27 | 0 | 46.00% | 32.18% to 59.81% |
| 11 + years | 153 | 31 | 0 | 83.15% | 77.74% to 88.56% |

$\chi^2 = 31.524$ (Significant, $p < 0.001$)

ITEM 10 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

Teachers should understand different systems of grading. (78.69%)

Objectivity in grading should be emphasized by teachers. (87.70%)

Teachers must be able to justify their grades. (91.80%)

Parental conferences are more important than grading techniques. (77.87%)

Teachers must be taught to be organized in all of their testing and grading procedures. (66.39%)

Colleges should use grading systems that are worth emulating. (23.77%)

Competency-based evaluation should be stressed rather than the grading of pupils. (87.70%)

ANALYSIS AND IMPLICATIONS FOR ITEM 10

The great majority of respondents believe that much emphasis should be placed upon teacher tasks related to grading even though it is felt that grading is a "necessary evil". Teachers should be trained in stressing objectivity in grading in order to justify grades to pupils, parents, and administrators. The senior high school respondents appear to feel the necessity of adequate grading procedures to a greater extent than do the teachers of the lower grades and persons in the "other" teaching area category are less receptive to the emphasis upon grading techniques. The course in evaluative techniques should place a high degree of importance upon the principles and procedures related to grading.

ITEM 11

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 66 | 17 | 0 | 79.52% | 70.84% to 88.20% |
| Guidance Counselors | 76 | 0 | 0 | 100.00% | 100.00% |
| Teachers | 73 | 12 | 0 | 85.88% | 78.48% to 93.28% |

$\chi^2 = 16.521$ (Significant, $p < 0.01$)

| Teaching Area | | | | | |
|---|---|---|---|---|---|
| Social Studies | 80 | 0 | 0 | 100.00% | 100.00% |
| Science/Mathematics | 48 | 12 | 0 | 80.00% | 69.88% to 90.12% |
| English/Foreign Languages | 54 | 0 | 0 | 100.00% | 100.00% |
| Other | 33 | 17 | 0 | 66.00% | 52.87% to 79.13% |

$\chi^2 = 45.224$ (Significant, $p < 0.001$)

| Grade Level Taught | | | | | |
|---|---|---|---|---|---|
| Grades 7 - 9 | 56 | 9 | 0 | 86.15% | 77.75% to 94.55% |
| Grades 10 - 12 | 159 | 20 | 0 | 88.83% | 84.22% to 93.44% |

$\chi^2 = 0.327$ (Not significant, $p = 0.05$)

| Years Experience | | | | | |
|---|---|---|---|---|---|
| 0 - 3 years | 10 | 0 | 0 | 100.00% | 100.00% |
| 4 - 10 years | 35 | 15 | 0 | 70.00% | 57.30% to 82.70% |
| 11 + years | 170 | 14 | 0 | 92.39% | 88.56% to 96.22% |

$\chi^2 = 20.246$ (Significant, $p < 0.001$)

ITEM 11 : COMMONLY-RECURRING PERCEPTIONS
(Per cents indicate per cent of sample (N = 244) stating these perceptions.)

Teachers must be taught that improving teacher communication with parents improves the overall teaching-learning situation. (86.88%)

Effective procedures in conducting a parent-teacher conference should be stressed to beginning teachers. (78.28%)

The preservice education of students should include experience in actual procedures of communicating with parents. (62.70%)

Teachers should use support personnel to a large extent when communicating with parents. (80.33%)

Teachers need training in taking initiative in communicating with parents. (68.85%)

Role-playing can be useful in teaching preservice students about reporting to parents. (47.95%)

Teachers are very hesitant and even fearful about talking with parents. (90.98%)

Teachers must know about the legal aspects of the confidentiality of pupil records when communicating with parents. (30.74%)

Teachers should be trained in the writing of anecdotal records. (59.02%)

ANALYSIS AND IMPLICATIONS FOR ITEM 11

The high percentages of "yes" responses combined with the high significance of the responses indicates that this area is of extreme importance to all professional personnel. The evaluative techniques course should attach very high importance to all aspects of this area of teacher training.

ITEM 12

| Professional Responsibility | YES | UNDECIDED | NO | PER CENT "YES" | CONFIDENCE INTERVAL FOR "YES" RESPONSES (p = 0.05) |
|---|---|---|---|---|---|
| Principals | 43 | 11 | 29 | 51.81% | 41.06% to 62.56% |
| Guidance Counselors | 47 | 18 | 11 | 61.84% | 50.92% to 72.76% |
| Teachers | 36 | 8 | 41 | 42.35% | 31.84% to 52.85% |
| | $\chi^2$ = 22.544 (Significant, $p < 0.001$) | | | | |
| **Teaching Area** | | | | | |
| Social Studies | 38 | 11 | 31 | 47.50% | 36.56% to 58.44% |
| Science/Mathematics | 33 | 6 | 21 | 55.00% | 42.41% to 67.59% |
| English/Foreign Languages | 29 | 9 | 16 | 53.70% | 40.40% to 67.00% |
| Other | 26 | 11 | 13 | 52.00% | 38.15% to 65.84% |
| | $\chi^2$ = 5.017 (Not significant, p = 0.05) | | | | |
| **Grade Level Taught** | | | | | |
| Grades 7 - 9 | 27 | 8 | 30 | 41.54% | 29.56% to 53.52% |
| Grades 10 - 12 | 99 | 29 | 51 | 55.31% | 48.03% to 62.59% |
| | $\chi^2$ = 6.706 (Significant, $p < 0.05$) | | | | |
| **Years Experience** | | | | | |
| 0 - 3 years | 7 | 0 | 3 | 70.00% | 41.60% to 98.40% |
| 4 - 10 years | 18 | 10 | 22 | 36.00% | 22.70% to 49.30% |
| 11 + years | 101 | 27 | 56 | 54.89% | 47.70% to 62.08% |
| | $\chi^2$ = 7.932 (Not significant, p = 0.05) | | | | |

ITEM 12 : COMMONLY-RECURRING PERCEPTIONS
(Per cents include per cent of sample (N = 244) stating these perceptions.)

Teachers should be trained to interpret the results of standardized tests. (56.15%)

Standardized tests should be used for pretesting in the classroom. (40.16%)

The cost of standardized tests is the major problem in using such tests in the classroom. (31.56%)

Teachers must be taught to insure that standardized tests used in the classroom are valid tests. (48.77%)

Teachers should be able to aid in the selection of standardized achievement tests for their own classes. (39.34%)

Teachers must be trained to interpret the results of standardized achievement tests and to follow up these test results. (45.49%)

Standardized achievement tests should not be used by classroom teachers unless the school administration requires the use of such tests. (46.72%)

ANALYSIS AND IMPLICATIONS FOR ITEM 12

The wide divergence of opinions in relation to this item suggests that teachers should possess a general, overall understanding of the strengths, weaknesses, and uses of standardized tests but that no extreme emphasis should be placed upon standardized tests. The evaluative techniques course should enable beginning teachers to comprehend the possible uses of these tests in the school system: procedures for selecting, administering, scoring, and interpreting these tests should be included without failing to discuss thoroughly the possible limitations of these tests and their applications.

In relation to the unobtrusive measures observed during the study, analyses of the 123 teacher-made tests offered by the classroom teachers yielded these findings:

(1) 95.12% of the tests were primarily objective tests with the inclusion of one or more essay test items.

(2) Approximately 29% of the objective tests demonstrated errors in item construction which would tend to lower the reliability of the tests.

(3) Approximately 9% of the objective tests used test formats which could be anticipated to produce confusion on the part of the students.

(4) The great majority of the essay test items appeared to be unambiguous in their construction.

(5) Many excellent examples of good objective tests were obtained to serve as models for students in the evaluative techniques course.

The materials offered by the guidance counselors were highly suitable for enabling the preservice students to observe the types of records and information available to them through the office of the school guidance counselor. The few standardized tests in specific subject areas offered by the schools were suitable for analysis by students in the evaluative techniques course.

In summary, the analyses of the data obtained for each of the twelve items included in the structured interviews indicates that each of the twelve item areas should be included in the undergraduate course in evaluative techniques with particular item areas, e.g., items 2, 8, 9, 10, and 11, receiving particularly strong emphasis. The enthusiastic cooperation received by the author from the secondary school personnel participating in this study implies forcefully that further articulation between the teacher-training colleges and the public schools may well produce future benefits for both.